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SUBSTITUTE SPECIFICATION

BACKFLOW PREVENTION DEVICE

BACKGROUND

[0003] The present invention relates to a backflow prevention device having a mounting housing that can be inserted into a fluid conduit or line, as well as at least one sealing ring that is held in an annular groove provided on the outer circumference of the mounting housing and that provides a seal between the mounting housing and the fluid conduit.

[0004] Backflow prevention devices of this sort are used in gas lines, water lines, or similar supply lines in order to prevent the fluid from flowing back against the intended direction of flow. Thus, check valves are increasingly also being installed in water lines in order to counteract the penetration of contaminated water into the freshwater supply line in housing of a vacuum.

[0005] The use of check valves of this sort in the area of thermostat valves often has the problem that when the cold water side or warm water side is shut off, the water that is enclosed between the closed check valve on the one hand and the likewise closed valve seat on the other hand is strongly heated by external influences, and therefore increases in volume until system pressures arise that result in damages at the weakest part of the supply line, and thus in many cases at the check valve. Ultimately, this can result in a closing of the supply line, or a similarly undesirable cross-flow.

[0006] A check valve is already known that has, on the end surface of its closing element, a domed attachment having a lateral exit opening (see. WO 93/01435). The bypass channel leading to the exit opening of the attachment, which functions as a pressure relief valve, is closed by a valve sealing piece that is lifted when the internal pressure increases, opening the exit opening to the fluid flowing back through the bypass channel. However, a disadvantage here is that the known backflow prevention device has, in addition to the required seals on its housing